Introduction

In response to the National Blueprint Increasing Physical Activities Among Adults Age 50 and Older, The Active Aging Toolkit has been developed as a collaborative effort of the Blueprint, professional organizations, and private industry as an evidence-based and an easy-to-instruct program for healthcare providers to educate their patients on increasing physical activity. Because physical activity is known to be essential in the prevention and management of chronic diseases, healthcare providers are the most important motivators for older adults to begin physical activity programs.

The purpose of this Toolkit is to provide specific interventions and programs to improve health and functional ability, to promote independence, and to prevent chronic disease and disability in older adults. The Toolkit allows healthcare providers to more effectively communicate with patients, including specific strategies for changing perceptions and behaviors toward physical activity, guidelines, educational materials, and research to support evidence-based practice.

The Active Aging Toolkit Provider Manual includes professional “how to” information on:

- strategies to promote physical activity to older adults.
- assessment tools to help individualize physical activity programs.
- Individual, evidence-based physical activity program options.
- guidelines to progress, motivate, and follow-up.

### How to Use the Active Aging Toolkit

- Incorporate strategies in the Active Aging Toolkit Provider Manual into daily practice when interacting with older adults.

- Use assessment tools in the Active Aging Toolkit Provider Manual to determine the risk, ability, and most appropriate physical activity prescription for your patient.

- Prescribe an individualized program for each patient such as the First Step to Active Health™. Programs should include cardiorespiratory, strength, flexibility, and balance activities.

- Review the contents of the individualized activity program with each patient. Use guidelines to modify and progress patients in the Active Aging Toolkit Provider Manual.

- Follow-up with the patient on their progress by having patients complete the physical activity logs.

- Use resources at www.FirstStepToActiveHealth.com to refer patients to other professionals or sources of information, particularly in your local community.
**Strategies**

### How to Assess Current Physical Activity Levels of Patients

- Routinely ask patients during their history and physical if they are currently physically active. This question may be considered a "vital sign" in the history.
  - "Do you participate in physical activity regularly; if so, what type, how long, and how often?"
  - "Are you active 30 minutes a day most days of the week?"
  - "Do you plan to become active in the next few months?"

- Other specific questions are helpful, such as, "Do you take the stairs when possible?", or "Do you work in the garden regularly?" Then determine if the patient is meeting the recommended levels of being moderately active for at least 30 minutes on most days of the week.

- For sedentary individuals who are reluctant to change, healthcare providers should assess patient fears about physical activity. Have patients complete the sentence, "The one thing that I fear about physical activity is__________." Address these worries to assess their readiness to increase physical activity.

### How to Counsel Patients on Physical Activity

- Older adult focus group participants were more likely to start and follow through with an exercise plan if their doctors recommended it. Healthcare providers should:
  1. provide concrete and consistent information
  2. make recommendations that are clear and consistent
  3. recognize obstacles that people face in a beginning and maintaining a physical activity program.

- Pre-contemplators are encouraged to do the following 3 things, which should be followed-up on the next visit:
  1. talk with someone who is active
  2. review the benefits of physical activity
  3. see how the benefits pertain to you

- Emphasize role of physical activity in being able to perform functional daily activities and in the prevention or management of chronic disease.
How to Recommend Patients
Increase Physical Activity

- Emphasize a change in lifestyle and daily behavior to recognize opportunities for physical activity, such as:
  - Walk or ride a bike rather than driving
  - Walk the dog
  - Take the stairs instead of an elevator
  - Begin hobbies requiring physical activity (gardening or hiking)
  - Incorporate light physical activity into daily routine
  - Park the car farther away and walk
  - Participate in physical activities with grandchildren

- A pedometer may be useful in motivating patients to increase daily activity levels to the recommended “10,000 Steps” per day.

- Recommend individuals reach a goal of 30 minutes of physical activity that makes them breathe harder on most or all days of the week. Emphasize it’s OK for them to start at 5 or 10 minutes of easy and fun activity, and work up to 30 minutes of activity on most days of the week. Individuals may also break up the 30 minutes into smaller, 10-minute segments.

- Prescribe individualized programs based on individual goals that incorporate cardiovascular, strength, flexibility, and balance activities such as the First Step to Active Health™ program. Specific, written physical activity prescriptions involving goal setting and follow-up are most effective.

- Refer patients to local community resources such as senior centers, medical fitness facilities, or university aging centers with evidence-based, structured physical activity programs.

“Approximately 95% of the 1.4 trillion dollars that we spend as a nation on health goes to direct medical care services, while an estimated 5% is allocated to preventing disease and promoting health. This approach is equivalent to waiting for your car to break down before you take it in for maintenance. By changing the way we view our health, the Steps initiative helps us move from a disease care system to a true health care system.”

—Secretary Tommy G. Thompson
U.S. Department of Health and Human Services
How to Assess Risk for Adverse Events

Because of the high incidence of heart disease in older adults and the increased risk for cardiac events, it's important that older adults are screened for potential problems during a physical activity program. The American College of Sports Medicine (ACSM) provides guidelines for exercise testing and prescription. Physical activity is generally safe for most individuals, although there are a few contraindications to exercise such as active rheumatoid arthritis, unstable cardiac disease, or recent myocardial infarction. As with any intervention, the benefits should outweigh the risks. Individuals who present with persistent musculoskeletal symptoms should be first referred to a physical or occupational therapist for evaluation before prescribing a structured physical activity program.

Major Signs/Symptoms of cardiovascular and pulmonary disease *

- Pain, discomfort (or anginal equivalent) in the chest, neck, jaw, arms, or other areas that may be due to ischemia
- Shortness of breath at rest or with mild exertion
- Dizziness or syncope
- Orthopnea or paroxysmal nocturnal dyspnea
- Ankle edema
- Palpitations or tachycardia
- Intermittent claudication
- Known heart murmur
- Unusual fatigue or shortness of breath with usual activities

*ACSM Guidelines, 2000

How to Assess & Document Physical Ability

There are several useful and clinically proven methods of assessing fitness levels among older adults. These assessments are used to help determine initial fitness levels, set goals, and to assess progress. It's important to choose the tests that are appropriate for the individual. These recommended assessments don't require expensive equipment or large facilities.

The Senior Fitness Test (Rikli & Jones, 2001) is one method suggested for office or clinical assessment of physical ability, and is particularly useful when documenting outcomes. Norms for this assessment have been established for various age groups. The test involves six different activities to assess upper and lower body strength and flexibility, as well as balance and cardiorespiratory fitness.

*ACSM Guidelines, 2000
Several scales are available to document functional limitations. The functional assessment checklist uses a simple checklist of subjective functional limitations that can help determine the appropriate physical activity program for older adults. It also helps patients to understand that their healthcare provider is aware of their functional limitations, and that their healthcare provider is developing an individual program to improve their specific functional needs.

<table>
<thead>
<tr>
<th>Identify Difficult Functional Activities</th>
<th>Activity to Emphasize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting dressed (shirts)</td>
<td>Upper Body Flexibility</td>
</tr>
<tr>
<td>Getting dressed (pants)</td>
<td>Upper &amp; Lower Body Flexibility</td>
</tr>
<tr>
<td>Putting on shoes</td>
<td>Upper &amp; Lower Body Flexibility</td>
</tr>
<tr>
<td>Personal Hygiene/Grooming (wash hair, brush teeth, etc)</td>
<td>Upper Body Flexibility</td>
</tr>
<tr>
<td>Housework</td>
<td>Cardiorespiratory, Upper/Lower Body Strength</td>
</tr>
<tr>
<td>Carrying groceries</td>
<td>Upper Body Strength, Balance</td>
</tr>
<tr>
<td>Opening jars (grip)</td>
<td>Upper Body Strength</td>
</tr>
<tr>
<td>Opening doors (push or pull)</td>
<td>Upper Body Strength, Balance</td>
</tr>
<tr>
<td>Stoop to pick up object from floor</td>
<td>Lower Body Flexibility and Strength</td>
</tr>
<tr>
<td>Reach and place objects overhead</td>
<td>Upper Body Flexibility, Balance</td>
</tr>
<tr>
<td>Lifting light objects</td>
<td>Upper Body Strength</td>
</tr>
<tr>
<td>Lifting heavier objects (&gt;20 pounds)</td>
<td>Upper &amp; Lower Body Strength</td>
</tr>
<tr>
<td>Walking for 10 minutes</td>
<td>Cardiorespiratory, Lower Body Strength</td>
</tr>
<tr>
<td>Stairs (up and down 1 flight)</td>
<td>Lower Body Strength, Balance</td>
</tr>
<tr>
<td>Walk uphill without getting tired</td>
<td>Lower Body Strength, Cardiorespiratory</td>
</tr>
<tr>
<td>Walking on uneven ground/surfaces</td>
<td>Lower Body Strength, Balance</td>
</tr>
<tr>
<td>Getting out of a chair</td>
<td>Lower Body Strength</td>
</tr>
<tr>
<td>Getting out of bed</td>
<td>Upper &amp; Lower Body Strength</td>
</tr>
<tr>
<td>Getting into and out of bathtub</td>
<td>Upper &amp; Lower Body Strength, Balance</td>
</tr>
<tr>
<td>Moving around in bed</td>
<td>Upper &amp; Lower Body Strength</td>
</tr>
<tr>
<td>Other recreational activity/hobbies</td>
<td>Varies with activity (discuss with patient)</td>
</tr>
</tbody>
</table>

Older adults tend to be more compliant with a physical activity program if they have individualized programs from their healthcare provider that is based on their needs and specific goals. It's important for healthcare providers to use the results of a physical ability assessment as well as their subjective functional limitations in determining individual goals and exercise needs.
• Individualize goals on each patient’s ability, stage of change, and level of support. For example, in sedentary individuals, use reasonable behavioral goals such as “I will walk with my spouse at least 3 times a week for 10-15 minutes”.

• Healthcare providers can use the physical ability tests and/or functional limitation checklist to look for possible areas to improve with an individualized physical activity program. For example:

<table>
<thead>
<tr>
<th>Limitation</th>
<th>Activity Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying groceries</td>
<td>Upper Body Strength, Balance</td>
</tr>
<tr>
<td>Getting in &amp; out of bathtub</td>
<td>Lower/Upper Body Strength, Balance</td>
</tr>
<tr>
<td>Walking on uneven ground</td>
<td>Lower Body strength, Balance</td>
</tr>
</tbody>
</table>

• Goals should be based on the results of the physical assessment or functional limitation checklist. For example, “After 8 weeks of exercise, I will be able to walk up and down a flight of stairs 3 times.” A chart is useful in motivating individuals to continue activity.

How to Determine Initial Physical Activity Prescription

Based on the results of an individual’s assessment, the healthcare practitioner can develop a specific program. Individuals who present with persistent musculoskeletal symptoms should be first referred to a physical or occupational therapist for evaluation before prescribing a structured physical activity program.

Healthcare providers should provide written, individualized physical activity programs for older adults based on their abilities, needs, and goals. In addition to counseling individuals on increasing physical activity with daily activities, individuals should receive a specific physical activity prescription in four basic areas: cardiorespiratory, strength, flexibility, and balance. Activities should be safe, appropriate, practical, easy to understand, and adaptable to different populations.

The most important factor in increasing physical activity is adopting an active lifestyle through behavioral change. Healthcare providers must remember that typical physical activity recommendations are GOALS, and not necessarily the initial step in adopting an active lifestyle. Emphasize that individuals may start at 5 or 10 minutes of easy and fun activity, and work up to 30 minutes of activity on most days of the week. Individuals may also break up the 30 minutes into smaller, 10-minute segments. They can incorporate other activities they may enjoy such as a sport or strength training program.
How to Prescribe a Well-Rounded Physical Activity Program

The ACSM and the Blueprint recommend the following elements of physical activity: cardiorespiratory (aerobic) endurance, muscle strength and endurance, balance, and stretching.

Many factors are taken into consideration in prescribing a physical activity program such as safety, physical ability, motivation, support, and goals. For some patients, simply walking for 10 minutes a day is a start; others who may not be able to walk can implement some upper body strengthening; and others may ready for a well-rounded daily routine. The overall goal of the program is to facilitate a behavioral change among older adults to begin some type of physical activity, working toward the recommendations of the ACSM*:

1. Incorporate moderate activity for a goal of 30 minutes at least 4 days per week
2. Perform strengthening activities at least 2 days per week
3. Include warm-up and cool down with each workout
4. Incorporate balance activities into daily activities

<table>
<thead>
<tr>
<th>Monday</th>
<th>Cardiorespiratory activities 10-30 minutes (walk/jog, bike, swim) &amp; flexibility activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>Strengthening and balance activities</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Cardiorespiratory activities 10-30 minutes and flexibility activities</td>
</tr>
<tr>
<td>Thursday</td>
<td>Strengthening and balance activities</td>
</tr>
<tr>
<td>Friday</td>
<td>Cardiorespiratory activities 10-30 minutes and flexibility activities</td>
</tr>
<tr>
<td>Saturday</td>
<td>Strengthening and balance activities</td>
</tr>
<tr>
<td>Sunday</td>
<td>Gardening, walk in park or mall, or other recreational activity with friends and family 10-30 minutes</td>
</tr>
</tbody>
</table>

It is critical NOT to overwhelm patients with physical activity. Remember, this is a behavioral change with many factors to consider. While the ACSM recommendations are ideal, any level of physical activity is beneficial for virtually every patient.

*ACSM Guidelines, 2000
It is difficult to provide “blanket” physical activity recommendations for all older adults. Healthcare providers should adapt physical activity prescriptions for specific populations based on their specific considerations and abilities. Obviously, different levels of ability should be taken into consideration. For example, strengthening activities should be performed while standing when possible; however, persons with difficulty standing can perform the same activities while sitting.

### Frail & Very Old Adults

Many contributing factors of frailty can be addressed through physical activity. Strength training, in particular, offers a safe and perhaps the most beneficial intervention for the frail & very old. The ACSM recommends “all exercise programs for the frail elderly should include progressive resistance training of the major muscle groups of the upper and lower extremities and trunk”. The ACSM recommends 2-3 days per week with 2-3 sets of exercise performed on each training day, including resistance activities in standing to enhance balance and muscle coordination. Strengthening & flexibility activities can be performed while sitting or in a bed. Balance training should also be incorporated under supervision, particularly for the very frail. Cardiorespiratory activities (difficult to perform in this population) should follow strength and balance training. Once the individual can tolerate weight bearing activity, moderate intensity aerobic training can begin. The ACSM (ACSM, 2000) recommends reaching a target frequency of 3 days per week for at least 20 minutes at 11-13 RPE Scale.

### Chronic Disease & Disability

Many chronic diseases can be prevented and treated with physical activity programs. Evidence exists supporting physical activity in the prevention & management of most chronic diseases and disabilities. The ACSM’s Exercise Management for Persons with Chronic Diseases and Disabilities (ACSM, 2003) is an excellent resource for healthcare providers. The following general guidelines should help healthcare providers modify physical activity programs for patients with chronic disease. Other healthcare professionals with experience in exercise may be able to modify or individualize programs specific to your patient’s disease or disability. If you are uncomfortable prescribing a physical activity program for your patient, a specialist in rehabilitation or exercise may be consulted.
• Use an “activity log” to track progress by noting the specific activity performed, as well as the intensity and duration of each activity. This chart is used to document progress toward goals and to show the healthcare provider on follow-up visits. Use either a monthly or weekly chart to track progress.

• Once the physical activity program has been established (including exercise prescription & goals), individuals must learn how to progress the activities. The following progressions are suggested:
  - **Frequency**: Increase the number of times per week
  - **Duration**: Increase the length or number of the activity/exercise (time, sets, repetitions)
  - **Intensity**: Increase the level of the activity (noted by resistance or RPE)

• Progression is the key to improving fitness. Progression simply involves increasing the duration or intensity of an activity toward individual goals.

### How to Keep Patients Motivated & Improve Compliance

- An individualized program focused on specific goals is key
- Once goals are attained, set new goals important to the individual
- Encourage patients to reward themselves for reaching the first goal
- Moderation is key; start gradually with enjoyable activities and progress slowly
- Emphasize lifestyle changes, incorporating activity into daily life
- Establish regular workouts (same time of day)
- Keep focused on short-term and long-term goals
- Maintain activity logs to record achievements
- Follow-ups (re-testing) with individuals encourage compliance (mail, email, phone or personal)
- Exercising with a partner or in groups helps improve compliance
- Family and friend support is crucial for encouragement
Safety Reminders

- Exercise should be postponed in patients with an unstable medical condition, healing injury, or uncontrolled disease.
- Patients should be informed to contact their physician if they experience chest pain or pressure, trouble breathing or shortness of breath, light-headedness or dizziness, or nausea.
- Warn patients not to perform activities that cause sharp pain or that can aggravate a medical condition.
- Inform patients that soreness is to be expected in the muscles with any unaccustomed exercise program. Use soreness as a guide for intensity. If patients are very sore the day after exercising, they should exercise at a lower intensity next time. If the pain persists more than 2-3 days, patients should contact their healthcare provider.
- Joint pain should be avoided.
- Remind patients to breathe properly. Remind them never to hold their breath while straining, particularly in patients with high blood pressure. Generally, exhale during muscle exertion, and inhale during relaxation.

<table>
<thead>
<tr>
<th>PUTTING IT ALL TOGETHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determine safety of physical activity (risk factors) &amp; diseases</td>
</tr>
<tr>
<td>2. Assess individual ability and reported limitations</td>
</tr>
<tr>
<td>3. Discuss personal goals, preferences, &amp; resources for physical activity</td>
</tr>
<tr>
<td>4. Determine activities from each successive step, appropriate for individual based on abilities, needs, goals</td>
</tr>
<tr>
<td>5. Determine appropriate frequency, intensity, and duration for each activity</td>
</tr>
<tr>
<td>6. Establish weekly program and discuss progression</td>
</tr>
<tr>
<td>7. Instruct in use of personal handout and logs</td>
</tr>
<tr>
<td>8. Follow-up and assess activity levels, and progress or modify activities on next visit</td>
</tr>
</tbody>
</table>
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The Active Aging Toolkit was funded by The Hygenic Corporation, makers of Thera-Band® products.  
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